# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/621,864 | 07/16/2003 | Ethan R. Bradford | TEGI0011 | 1754 |

22862          7590          06/16/2008
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2626 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 06/16/2008 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/621,864 | BRADFORD ET AL. |
| | Examiner | Art Unit | |
| | LAMONT M. SPOONER | 2626 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)☒ Responsive to communication(s) filed on <u>24 March 2008</u>.
2a)☐ This action is **FINAL**.           2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4)☒ Claim(s) <u>1,4-16,19-31,34,45 and 48</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1,4-16,19-31,34,45 and 48</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

### Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>16 July 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

# DETAILED ACTION

## *Introduction*

1.     This office action is in response to applicant's amendment filed on 724/07. Claims 1, 4-16, 19-31, 34, 45, and 48 are currently pending and have been examined.

## *Continued Examination Under 37 CFR 1.114*

2.     A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/24/08 has been entered.

## *Response to Arguments*

3.     Applicant's arguments with respect to claims 1, 4-16, 19-31, 34, 45 and 48 have been considered but are moot in view of the new ground(s) of rejection.

## *Claim Rejections - 35 USC § 112*

4.      The following is a quotation of the second paragraph of 35 U.S.C.

112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.      Claims 1, 4-16, 19-31, 34, 45, and 48  are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly

point out and distinctly claim the subject matter which applicant regards as

the invention.

More specifically, in claims 1, and 16, applicant amendment provides

claims directed towards information "wherein the order of the words

determined by the RDB are displayed before the order of the words

determined by the LDB." The Examiner is perplexed with regards to the

displaying of the determined "**order**" of the words, rather than displaying

the actual words. The Examiner notes the words in the LDB are ordered

based upon a linguistic frequency of use model. However, in claim 1, lines

6-8, the Examiner is unsure of how the words are ordered, or what the

initial ordering is based upon, wherein lines 18-20, include a dynamic

**reordering** frequency count, which implies an initial frequency

ordering/count of some sort to the RDB, which is not claimed, and thus renders the claimed concept confusing.

The Examiner further notes, applicant claims to "dynamically retrieving from said LDB and from said UDB words that include the sequence of letters formed by the user input." The Examiner notes that this may be the same word, each from a different location. Furthermore, it appears the applicant claims to display "the" <u>retrieved words</u> (**applicant has deleted "said" retrieved words**-thus any retrieved words would be sufficient, i.e. words retrieved from an external source irrelevant to the process/apparatus, of the claims). The Examiner notes as currently claimed, the same word may be displayed in the list twice to the user, once as an LDB element, and again as an UDB element, which is confusing. The Examiner further notes, the user is enabled to "select a word from the displayed list." However, upon the selection of "a" word, the applicant further assigns a "dynamic reordering frequency count to "**words**" selected, at which point there is only one word selected, which thus renders the remaining elements also confusing, wherein, "inserting the selected words' assigned frequency **counts** into the RDB." also is numerically inconsistent, and lacks clarity.

Furthermore, in claims 1, 16 applicant's amendment claims "providing

a user database (UDB) separate from the LDB which stores defined words

that the user specifically enters into the system and which includes a

reorder database (RDB) that stores database object numbers;" Applicant

further claims, "assigning a dynamic reordering frequency count to words

selected by the user and inserting the selected words' assigned reordering

frequency counts and object numbers into said reorder database."

However, applicant only teaches of having **object numbers**, p.8 lines 25-

27, as a number in **the LDB** 505 (**not the RDB-**there is zero mention of an

RDB storing an object number) for words that are contained in the

Linguistic Database 401. Therefore, a user defined word, as a word

entered specifically by the user, which may not be a word in the LDB, may

not contain an object number, and thus the Examiner is unable to

determine how or where it is taught that the RDB stores object numbers.

Furthermore, the Examiner notes, applicant simply claims to store object

numbers for words contained in the LDB, and then in nowhere else in the

independent claims or any dependent claim make use of, logically or

physically, or purposefully connect this element to the invention. The

Examiner has interpreted these amended claim elements as essential to

scope and meaning of the claim, and as explained above, are unclear,

indefinite, and confusing. The Examiner is unable to determine a

reasonable interpretation of the claims, without parting from the scope of

the invention.

6.      The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7.      Claims 1, 4-15, 16, 19-31, 24, 45 and 48 are rejected under 35

U.S.C. 112, first paragraph, as failing to comply with the written description

requirement.  The claim(s) contains subject matter which was not described

in the specification in such a way as to reasonably convey to one skilled in

the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

More specifically, in claims 1, 16 applicant's amendment claims

"providing a user database (UDB) separate from the LDB which stores

defined words that the user specifically enters into the system and which

includes a reorder database (RDB) that stores database object numbers;"

Applicant further claims, "assigning a dynamic reordering frequency count

to words selected by the user and inserting the selected words' assigned

reordering frequency counts and object numbers into said reorder database." However, applicant only teaches of having **object numbers**, p.8 lines 25-27, as a **number in the LDB** 505 for words that are contained in the Linguistic Database 401 (**not the RDB-**there is zero mention of an RDB storing an object number). Therefore, a user defined word, as a word entered by the user, which may not be a word in the LDB, may not contain an object number, and thus the Examiner is unable to determine how or where it is taught that the RDB stores object numbers. Furthermore, the Examiner notes, applicant simply claims to store object numbers for words contained in the LDB, and then in nowhere else in the independent claims or any dependent claim make use of, logically or physically, or purposefully connect this element to the invention. The Examiner has interpreted these amended claim elements as essential to scope and meaning of the claim, and as explained above, are unclear, indefinite, and confusing. The Examiner is unable to determine a reasonable interpretation of the claims, without parting from the scope of the invention.

## *Claim Rejections - 35 USC § 102*

8.     The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.     Claims 1, 4-8, 11, 14, 16, 19-23, 26, 31, 34, 38, 45 and 48 are

rejected under 35 U.S.C. 102(e) as being anticipated by King et al. (King,

6,307,549).

As per **claims 1 and 16**, King teaches  a process for reordering items

in a database to be retrieved for display to a user, comprising the steps of:

accepting user input from a keyboard (C.7 lines 14-16);

ordering words in a linguistic database (LDB) according to a linguistic

frequency of use model (C.13 line 53-C.14 line 1-his frequency of use

model, developed from a corpus);

ordering words in a user database (UDB) separate from the LDB that

stores user defined words that the user specifically enters into the system

and that includes a reorder database (RDB) (C.14 lines 1-13, his latter

construction, including a separate construction which includes a reorder

database, based upon user entry, this separate construction is deemed

relevant to encompass a separate database wherein the LDB corpus

likelihood developed from the corpus remains unchanged, as it does not

have a modifiable frequency field, furthermore, C.15 lines 57-60-teaches

multiple vocabulary modules and the ranking of the displayed word, also

based on frequency of use);

storing in the RDB object numbers for words contained in the LDB

(Fig. 4B items 400-his object number/identifier);

dynamically retrieving from said LDB and from said UDB words that

include the sequence of letters formed by the user input (C.7 lines 22-36-

his retrieved words for selection);

displaying to the user a list of retrieved words, wherein the order of

words determined by the RDB are displayed before the order of words

determined by the LDB (ibid-his ordered displayed retrieved words for

selection);

enabling the user to select a word from the displayed list (C.7 lines

46-60-his user selection); and

assigning a dynamic reordering frequency count to words selected by

the user and inserting the selected words' assigned reordering frequency

counts into the RDB (C.14 lines 1-13-his dynamic frequency field as the

reordered frequency counts).

As per **claims 4, 19, 34 and 48**, King teaches the process of claim 1,

wherein said assigning step inserts a first ordered word from said list and a

non first ordered word into said reorder database (C.14.1ines 1-13-his

frequency use of words in his vocabulary base) if the user has selected the

non first ordered word for the first time, and wherein the first ordered word

is inserted if it does not already exist in said reorder database (C.22.1ines

1- 10-his frequency use of custom vocabulary).

As per **claims 5, and 20**, King teaches the process of claim 4,

wherein the first ordered word in said list loses its position if the non first

ordered word is selected by the user a predetermined number of times, and

wherein the non first ordered word is then assigned a higher frequency

value than the first ordered word (C.14.1ines 1-14-his reordering, based

upon the frequency in descending order).

As per **claims 6 and 21,** King teaches the process of Claim 4,

wherein all non first ordered words entered into said reorder database are

initially assigned equal reordering frequencies (C. 14.lines 1-14-inherent to

frequency count, wherein all objects must start at a frequency of 0).

As per **claims 7 and 22**, King teaches the process of claim 1,

wherein a word's reordering frequency is increased each time the user

selects the word (C.14.1ines 1-13-inherent to the process of frequency

count of each object).

As per **claims 8 and 23**, King teaches the process of Claim 1,

wherein if a word in said list is selected by the user and the word is below a

second ordered position then said assigning step assigns the word's

reordering frequency to a value that places the word in the second ordered

position in said list (C.13.1ines 53-67, C.14.1ines 1-14-is

necessary/inherent in re-ordering a list based on frequency, in changing

position due to frequency of use).

As per **claims 11 and 26**, King teaches the process of Claim 10,

wherein said checking step removes user defined words having reordering

frequencies below the predetermined threshold after other words having

reordering frequencies below the predetermined threshold from said

reordering database (ibid-see claim 10, and Fig. 8F-his user define word,

the Examiner notes user defined words, any word, would be inherently; per

the invention, be removed, if below the threshold).

As per **claims 14 and 29**, King teaches the process of claim 1,

further comprising the step of:

resolving reordering frequency collisions in said list when a user

defined word and a word from said linguistic database have equal

reordering frequency counts by ordering the user defined word first (C.15

lines 53-67-his word vocabulary module, ordered by use frequency, as

discussed in claim 1, with respect to the set, other vocabulary module

developed from a corpus, wherein the user defined module has higher

priority for equal and other frequency values).

As per **claims 31 and 45**, King teaches wherein when a word from

the LDB is selected for the first time (C.14 lines 10-14-his user usage), said

step of assigning uses the word's frequency of use order in the LDB as an

initial dynamic reordering frequency count (C.14 lines 1-13-his user usage

an frequency of use field, and initial corpus likelihood of usage).

### *Claim Rejections - 35 USC § 103*

10.    The following is a quotation of 35 U.S.C. 103(a) which forms the

basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.     Claims 10 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over King, as applied to claim 1 above, and further in view of Borland (US 6,320,943).

As per **claims 10 and 25**, King teaches the process of claim 1, but lacks claim 1 further comprising the step of periodically checking the free space of said reordering database, if the free space is less than a predetermined amount, then removing from said reorder database words that have reordering frequency counts below a predetermined threshold.

However, Borland teaches periodically checking the free space of a database, if the free space is less than a predetermined amount, then removing from said database data that have frequency counts below a predetermined threshold (C.7 lines 1-11). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to modify King's database with Borland's least frequently used data purging method, providing the benefit of optimizing a finite space of memory with priority information (Borland, lines 1-5).

12.    Claims 13 and 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over King, as applied to claim 1 above, and further in view of

Borland (US 6,320,943).

As per **claims 13 and 28**, King teaches the process of laim 1, further

comprising the step of: resolving reordering frequency collisions in said list

wherein said resolving step resolves a collision if two words have the same

reordering frequency by ordering the word having a higher ordering in said

(user database first –see claim 14, C.15 lines 53-67-his word vocabulary

module, ordered by use frequency, as discussed in claim 1).

King does explicitly teach ordering the word having a higher ordering

in said linguistic database first.

However, the Examiner notes King teaches selecting a priority to the

vocabulary module to be used first (C.15 lines 53-67-his word vocabulary

module being selected and prioritized, and ordered by use frequency, as

discussed in claim 1). Therefore, at the time of the invention, it would have

been obvious to one ordinarily skilled in the art to select a desired

vocabulary module to be used first, as King teaches, providing a

customizable ordering database.

13.     Claims 12 and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over King et al. (King, US 6,307,549), as applied to claim 1

above, and further in view of Miller (US 5,805,911 ).

As per **claims 12 and 27**, King teaches the process of claim 1, but

lacks explicitly teaching: resolving reordering frequency collisions in said

list; wherein said resolving step resolves a collision if two words have the

same reordering frequency by ordering the most recently selected of the

two words first. However, Miller teaches resolving reordering frequency

collision, by ordering the most recently...( C.9 lines 45-54-his most recent

ordered word displayed first). Therefore, at the time of the invention, it

would have been obvious to one ordinarily skilled in the art to combine

King's list with the recent selection of Miller. Providing the benefit of an

ordered prediction list, by recent selection (ibid).

### *Allowable Subject Matter*

14.     Claims 9, 15, 24 and 30 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form

including all of the limitations of the base claim and any intervening claims.

## *Conclusion*

15.    Applicant's amendment necessitated the new ground(s) of rejection
presented in this Office action.  Accordingly, **THIS ACTION IS MADE
FINAL**.  See MPEP § 706.07(a).  Applicant is reminded of the extension of
time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to
expire THREE MONTHS from the mailing date of this action.  In the event a
first reply is filed within TWO MONTHS of the mailing date of this final
action and the advisory action is not mailed until after the end of the
THREE-MONTH shortened statutory period, then the shortened statutory
period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the
mailing date of the advisory action.  In no event, however, will the statutory
period for reply expire later than SIX MONTHS from the date of this final
action.

16.    Any inquiry concerning this communication or earlier communications
from the examiner should be directed to LAMONT M. SPOONER whose
telephone number is (571)272-7613.  The examiner can normally be
reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Patrick Edouard can be reached on 571/272-7603.

The fax phone number for the organization where this application or

proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status

information for published applications may be obtained from either Private

PAIR or Public PAIR. Status information for unpublished applications is

available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business Center

(EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-

1000.

lms
5/29/08

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2626